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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,437	10/07/2004	Daniel Patrick Morris	056258-5076	7503
9629 7590 03/29/2007 MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			EXAMINER RODEE, CHRISTOPHER D	
			ART UNIT	PAPER NUMBER
			1756	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/29/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/510,437

Applicant(s)

MORRIS ET AL.

Examiner

Christopher RoDee

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-88 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 56-65 and 69-88 is/are rejected.
- 7) ☒ Claim(s) 66-68 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/19/05 10/7/04.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 72-88 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear in the instant claims if the process is required to produce the toner specified in the preamble of the claim. It appears that the toner having the wax melting point and domain size, and toner mean circularity, SF-1, and SF-2 values is the required product and the claims have been examined on this basis but clarification is required in response to this Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 56-65 and 69-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohno *et al.* in US Patent 6,096,468.

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Ohno discloses a toner having toner particles containing at least a binder resin (col. 11, l. 64- col. 12, l. 25), a wax and a charge control agent compound represented by Formula (A) (col. 3, l. 19-45). The toner has shape factors SF-1 and SF-2 with a value of $100 < \text{SF-1} \leq 160$ and a value of $100 < \text{SF-2} \leq 140$ (col. 3, l. 66-67). The toner also has an average circularity of from 0.920 to 0.995 (col. 8, l. 34-55). The ratio of SF-2/SF-1 is a value of less than 1 to give more consistent particle size distributions during development (col. 7, l. 59 – col. 8, l. 4). The equates to a ratio SF-1/SF-2 of greater than 1 in the instant claims, so that SF-1 is greater than SF-2. See Examples 7 and 12-15 (Toners G, L, M, and N). The toner has a diameter of from 4 to 9 μm .

The wax used in the toner has a maximum endothermic peak of from 50 °C to 100 °C (col. 20, l. 23-32). This peak would appear to correspond with the wax melting point because it is the largest endothermic peak. The wax is dispersed in the binder resin in the form of spherical and/or spindle-shaped island or islands. The wax and the binder resin are not soluble in each other. Typical examples are shown in Figs. 11A and 11B (col. 18, l. 61-67). The relationship between the diameter of the wax and the diameter of the toner is given as r/R where r is the diameter of the largest wax island and R is the toner diameter (i.e, cross-sectional plane). This relationship varies from 0.05 to 0.95 (col. 19, l. 15-49). The wax is present in an amount of from 3 to 40 parts by weight per 100 parts by weight of the binder resin (col. 20, l. 65-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the size of the wax islands to values within the ratio of r/R where the value of R (corresponding to the diameter) is from 4 to 9. This provides for r values of from 0.20 μm to 8.55 μm for the range of diameters. The artisan would have found it obvious to optimize values within this range to give the fixing performance desired.

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Allowable Subject Matter


Claims 66-68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on Monday to Thursday from 5:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


CHRISTOPHER RODEE
PRIMARY EXAMINER

cdr
26 March 2007